

(12) PATENT APPLICATION

(11) Application No. AU 199226311 A1

(19) AUSTRALIAN PATENT OFFICE

(54) Title
Sheet lining butt joiner member and method of use

(51) International Patent Classification(s)
E04B 001/61 E04F 013/00

(21) Application No: **199226311** **(22) Date of Filing:** **1992.10.09**

(30) Priority Data

(31) Number **PK8851** **(32) Date** **1991.10.14** **(33) Country** **AU**

(43) Publication Journal Date: **1993.04.22**

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P/00/001
Section 29

AUSTRALIA
Patents Act 1990

PATENT REQUEST : STANDARD PATENT

I, being the person identified below as the Applicant, request the grant of a patent to the person identified below as the Nominated Person, for an invention described in the accompanying standard complete specification.

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Nominated Person: As Above
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Invention Title: SHEET LINING BUTT JOINER MEMBER AND METHOD OF USE

Name of actual Inventor: Robert John JOYNSON

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ASSOCIATED PROVISIONAL APPLICATION(S) DETAILS

Application Number: PK 8851
Date: 14 October 1991

Dated 8 October 1992


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Patent Attorneys for the Applicant

P/00/008
Section 29(1)
Regulation 3.1(2)

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NOTICE OF ENTITLEMENT

I, ROBERT JOHN JOYNSON of 1 Waterloo Court, Keysborough, Victoria, 3173, being the applicant in respect of Application No. PK 8851, state the following:-

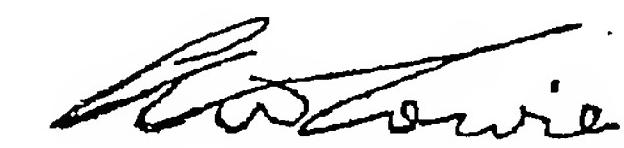
The person(s) nominated for the grant of the patent:

Robert John Joynson is the actual inventor.

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Dated this 8th day of October, 1992.



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AU9226311

(12) PATENT ABSTRACT (11) Document No. AU-A-26311/92
(19) AUSTRALIAN PATENT OFFICE

- (54) Title
SHEET LINING BUTT JOINER MEMBER AND METHOD OF USE
- International Patent Classification(s)
(51) E05F 015/20 B61D 019/00 E04B 001/61 E04F 013/00
- (21) Application No. : 26311/92 (22) Application Date : 09.10.92
- (30) Priority Data
- (31) Number (32) Date (33) Country
PK8851 14.10.91 AU AUSTRALIA
- (43) Publication Date : 22.04.93
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CARTER SMITH & BEADLE , Qantas House, 2 Railway Parade, CAMBERWELL VIC 3124
- (57) Claim
1. A method of joining and securing the abutting edges of lining material sheets on ceilings or walls of a building structure comprising the steps of securing a number of spaced-apart butt joiner members to the inner surface of a first lining sheet so as to extend transversely outwards of an edge of the sheet for substantially one half their length, said joiner members being of elongated form with the side thereof engaging said sheet being of inwardly curved configuration, securing said first sheet to the joists or studs of a ceiling or wall so that said butt joiner members are located in the space between a pair of adjacent joists or studs with the edge of said sheet extending approximately midway between said adjacent joists or studs, engaging a further lining sheet in abutting relationship with said first sheet and securing said further sheet to the joints or studs and to said outwardly extending parts of said joiner members whereby the surfaces of the sheets in the locality of the abutting edges thereof assume an inwardly transversely curved configuration allowing application and trowelling of filler material to bring said curved area into the plane of the sheet surfaces.

6. A butt joiner member for engagement with and attachment between two abutting lining material sheets on ceilings or walls of a building structure, said member being of elongated form with a side thereof adapted to engage the sheet surfaces being inwardly curved in the longitudinal direction between the ends of the member and adapted to be secured on the inner surfaces of said abutting sheets transversely of the butt joint and in the vicinity of said joint so as to form a transversely inwardly curved area extending over and between the abutting sheets in the vicinity of the butt joint.

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COMPLETE SPECIFICATION

FOR A STANDARD PATENT

ORIGINAL

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Actual Inventor: ROBERT JOHN JOYNSON

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Invention Title: SHEET LINING BUTT JOINER MEMBER AND METHOD OF USE

Details of Associated Provisional Application: No: PK 8851

The following statement is a full description of this invention, including the best method of performing it known to me:

SHEET LINING BUTT JOINER MEMBER AND METHOD OF USE

This invention relates to a plasterboard butt joiner member and the method of using same in the installation and fixing of lining material such as plasterboard sheets in abutting relationship on ceilings and walls.

In the generally known method of fixing lining or plasterboard sheets, the abutting edges of the sheets are located along and over a joist or stud and secured thereto as by nailing often together with the use of an adhesive. The joint or seam between sheets is then covered with a self adhesive fibre glass tape or a paper tape and coated with an adhesive paste or filler material such as cement and thereafter thin layers of filler material such as cement or plaster paste are applied with a broadknife or like tool to provide a smooth finish over the location of the joint or seam.

This method of fixing invariably results in the location of the joint having an unsightly uneven or ridged appearance and more importantly any movement after time of the joists or studs of the building structure results in the appearance of cracks at the location of the joint.

Another known method of fixing lining or plasterboard sheets, wherein the abutting edges of adjacent sheets are located between the joists or studs, is by use of backblocks adhesively secured on the inside faces of the sheets along the joint together with cleats or float sticks comprising lengths of scrap timber which are removably nailed through the sheets into the joists or studs on either side of the abutting edges of the sheets to hold the sheets in abutting relationship. The cleats or float sticks are then removed and the bandage tape is applied as in the previously described method and finishing layers of filler material such as plaster or cement are applied to obtain a smooth finish.

This method is time consuming in the obtaining and securing the timber cleats and removing same when the joint between the sheets is effected, and as before, the area around the joint is likely on occasions to have an uneven or ridged appearance.

- When the joists or studs comprise metal members it is the practice of commercial
- 5 plasterers to use lengths of flat based metal members extending transversely of and/or longitudinally of and overlapping the abutted joint between the sheets on the inner faces thereof and fixed to the sheets between adjacent joists or studs but this method only provides a flush joint at the sheet edges which is difficult to cover with finishing filler material without producing bumps and ridges on the finished surface.
- 10 It is an object of the present invention to provide a method of joining the abutting edges of lining sheets such as plasterboard sheets in the space between adjacent joists or studs in a building structure which overcomes the disadvantages of the known prior art, and allows for a smooth finish flush with the faces of the sheets to be obtained and which will not be subject to cracking or other disfiguration on the ceiling or wall on subsequent
- 15 movement of the structure.

- It is also an object of the invention to provide butt joiner members which are located on the inside of the ceiling or wall and secured thereto through the lining sheets so as to hold the edges of the sheets together and provide a transversely depressed or inwardly curved area along the location of the abutment between sheets so as to allow for
- 20 the application of layers of filler material such as cement or plaster to bring the abutment area of the sheets up flush with the plane of the sheets and provide a finished level appearance throughout the surface of the ceiling or wall.

In accordance with the invention there is provided a method of joining and securing the abutting edges of lining material sheets on ceilings or walls of a building structure

comprising the steps of securing a number of spaced-apart butt joiner members to the inner surface of a first lining sheet so as to extend transversely outwards of an edge of the sheet for substantially one half their length, said joiner members being of elongated form with the side thereof engaging said sheet being of inwardly curved configuration, securing said 5 first sheet to the joists or studs of a ceiling or wall so that said butt joiner members are located in the space between a pair of adjacent joists or studs with the edge of said sheet extending approximately midway between said adjacent joists or studs, engaging a further lining sheet in abutting relationship with said first sheet and securing said further sheet to the joints or studs and to said outwardly extending parts of said joiner members whereby 10 the surfaces of the sheets in the locality of the abutting edges thereof assume an inwardly transversely curved configuration allowing application and trowelling of filler material to bring said curved area into the plane of the sheet surfaces.

The butt joiner members may be of solid timber construction but are preferably of channel configuration with the curved or cambered base thereof engageable with the lining 15 sheets. The channel members may be formed from a suitable plastics material such as P.V.C. but are preferably formed from metal such as galvanised steel.

The fixing of the lining sheets to the butt joiner members is by means of screws, such as known dry wall screws, which may be of the countersunk type or may be flat head screws provided the heads thereof can engage through the surface of the sheets so as to 20 provide a substantially flat surface in the region of said screw heads. The base surfaces of the channel-shaped butt joiner members engaging the sheet surfaces may be knurled or roughened to ensure positive non-slidable engagement of the points of the screws with the members so as to eliminate movement of the sheets from their abutting relationship when installed.

The method of the invention may also include the use of known backblocks, being lengths of plasterboard or the like, extending longitudinally over the joint between the sheets and located between the butt joiner members.

In order that the invention and its manner of performance may be more fully understood, reference will now be made to an embodiment of the invention as illustrated in the accompanying drawings in which:-

Figure 1 is a perspective view of a butt joiner member according to one embodiment of the invention;

Figure 2 is a side elevational view of the member of Figure 1 illustrating the curvature or camber applied to the member;

Figure 3 is a perspective view from inside a ceiling of a plasterboard sheet secured to the ceiling joists and showing the location of the butt joiner members; and

Figure 4 is a cross-sectional side elevation of two abutting plasterboard sheets with a butt joiner member located between a pair of adjacent joists or studs.

Referring to the drawings, the channel-shaped butt joiner member 5 illustrated is formed of lightweight galvanised steel with the outer surface of the base thereof being provided with a knurled or roughened surface 11 so that the points of the fixing screws at locations 9 and 10 in Figure 4 will positively engage with and enter the base of the member 5 in strict alignment with the hole through the plasterboard sheet.

As more clearly illustrated in Figures 2 and 4, the base of member 5 is of curved or cambered configuration with a preferred depth 6 of camber at the centre of a member of preferably 300mm length 30mm width and 20mm height, being 2mm.

When installing ceiling or wall sheets 7 according to the invention, with 1200mm wide sheets, it is preferred to use at least 4 butt joiner members 5 as shown in Figure 3 and

before securing the first sheet 7 to joists or studs 8 the members 5 can be secured at spaced-apart locations by two screws for each member at locations 9. The members 5 thus secured extend for one half their length beyond the edge of plasterboard sheet 7 to be abutted with another sheet. When the first sheet 7 has been secured to joists or studs 8 by screws or nails at 12, the second sheet 7 is located in abutting relationship with the first sheet and secured to joists or studs 8 and thereafter secured to the members 5 and as shown in Figure 4, only one screw at location 10 adjacent the butt joint is required, although if desired two screws as in the first sheet 7 may be used.

When the abutting sheets 7 have been attached to the butt joiner members 5 as shown in Figure 4 there is a resultant cavity 6 of 2mm depth at the line of the abutted joint. Plasterers' tape, of either fibre glass or paper is then applied along the butt joint in the formed cavity in known manner and the cavity can then be filled and trowelled flat level to the plane of the sheets 7.

Backblocks of known type and for known purpose may advantageously be used in conjunction with the butt joiner members of the invention, and whilst reference has been made to plasterboard sheets in the above-described embodiment, it will be appreciated that the invention would encompass the use of fibre/board sheets cement/fibre sheets and like sheet lining materials capable of slight deflection adjacent their abutting edges.

The entire contents of the provisional specification lodged with Australian Patent Application PK 8851 of which this is the complete specification is hereby imported into this specification and forms part of the disclosure of this specification.

The claims form part of the disclosure of this specification.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A method of joining and securing the abutting edges of lining material sheets on ceilings or walls of a building structure comprising the steps of securing a number of spaced-apart butt joiner members to the inner surface of a first lining sheet so as to extend transversely outwards of an edge of the sheet for substantially one half their length, said joiner members being of elongated form with the side thereof engaging said sheet being of inwardly curved configuration, securing said first sheet to the joists or studs of a ceiling or wall so that said butt joiner members are located in the space between a pair of adjacent joists or studs with the edge of said sheet extending approximately midway between said adjacent joists or studs, engaging a further lining sheet in abutting relationship with said first sheet and securing said further sheet to the joints or studs and to said outwardly extending parts of said joiner members whereby the surfaces of the sheets in the locality of the abutting edges thereof assume an inwardly transversely curved configuration allowing application and trowelling of filler material to bring said curved area into the plane of the sheet surfaces.
2. A method according to Claim 1 wherein backblocks are located and secured between said butt joiner members on the inner sides of said lining material sheets so as to extend along and over the abutting joint of the sheets.
- 20 3. A method according to Claim 1 or Claim 2 wherein the securing of said sheets to the butt joiner members comprises the use of screws engageable through the lining sheets with the heads flush with the surfaces thereof.

4. A method according to Claim 3 wherin the butt joiner members are of channel configuration with the base parts thereof engageable with the sheet surfaces having knurled or roughened surfaces to engage with the points of the securing screws in a positive non-slidable manner so as to eliminate movement of the sheets from their abutting relationship when installed.
5. A method according to any one of the preceding claims wherein the lining material sheets are plasterboard sheets.
6. A butt joiner member for engagement with and attachment between two abutting lining material sheets on ceilings or walls of a building structure, said member being of elongated form with a side thereof adapted to engage the sheet surfaces being inwardly curved in the longitudinal direction between the ends of the member and adapted to be secured on the inner surfaces of said abutting sheets transversely of the butt joint and in the vicinity of said joint so as to form a transversely inwardly curved area extending over and between the abutting sheets in the vicinity of the butt joint.
7. A butt joiner member according to Claim 6, said member being of timber construction.
8. A butt joiner member according to Claim 6, said member being formed of plastics material.

9. A butt joiner member according to Claim 6, said member being formed of metal.
10. A butt joiner member according to Claim 8 or Claim 9, said member being of channel shaped configuration with the base of the channel adapted to engage the sheet surfaces.
- 5 11. A butt joiner member according to Claim 10 wherein the base of the channel is knurled or roughened on the engaging surface thereof.
12. A method of joining and securing the abutting edges of lining material sheets on ceilings or walls of a building structure substantially as herein described with reference to the accompanying drawings.
- 10 13. A butt joiner member for engagement with and attachment between two abutting lining material sheets on ceilings or walls of a building structure substantially as herein described with reference to the accompanying drawings.

DATED this 8 October, 1992

CARTER SMITH & BEADLE

15 Fellows Institute of Patent Attorneys of Australia

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ROBERT JOHN JOYNSON

ABSTRACT

A method of joining and securing abutting edges of lining material sheets on ceiling or walls of a building structure between adjacent joists or studs using a number of spaced-apart butt joiner channel members secured on the inside surfaces of the sheets and extending transversely across the abutting edges of the sheets. The base part of the channel members is of curved configuration lengthwise so that when secured in position the area in the vicinity of the edges of the sheets assumes an inwardly transversely curved configuration allowing application of filler material to said curved area to bring it into the plane of the sheet surfaces.

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